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ACUSHNET COMPANY
333 BRIDGE STREET
P. O. BOX 965
FAIRHAVEN, MA 02719

EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT PAPER NUMBER

3711

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,317

Applicant(s)

GILBERT ET AL.

Examiner

Stephen L. Blau

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 is indefinite in that the "may" in line 2 is indefinite. It is uncertain whether the function may refers to can be performed or not. It is recommended to replace the word "may" with the words -- is able to -- to remove this rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay in view of Nagi.

McKay discloses a first body of variable stiffness/C.O.R. in the form of different desired pressures a plastic core (Col. 4, Lns. 54-58) is inflated to (Col. 6, Lns. 16-17), a rear cavity extending rearward from a front face (Fig. 5), a plastic core of a second material less dense and more flexible than a first material in the form of metal of various types (Col. 4, Lns. 1-10), compressed gas (Col. 4, Lns. 54-58), a rear cavity comprising an opening that is sealed by a visible portion of a core in the form of a head not having a plug (Col. 6, Lns. 15-23 (The terms a closure can be installed implies that it doesn't have to be.)), the curvature and configuration of the striking face are all of conventional design and configuration (Col. 5, Lns. 19-23), and an inflatable bladder construction can be incorporated into various hollow club heads such as those shaped as a driver (Col. 9, Lns. 13-21). McKay does not disclose the density of the plastic core but clearly an artisan skilled in the art of making an expandable core would have selected a suitable density for the flexible plastic core in which having a density equal or less than 4.5 gm/cc is included.

McKay lacks an internal volume between 35 cc to 50 cc, a plastic core having a density equal or less than 4.5 gm/cc, a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center, a coefficient of Restitution varying across a front face, and air.

Nagai discloses a hollow club head in the form of a utility iron club (Title) having an internal volume between 35 cc to 50 cc (Claim 20) and a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center in order to create a spring-like effect (Fig. 1, [0020]). In view of the publication of Nagai

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it would have been obvious to modify the head of McKay to be a utility iron club head having an internal volume between 35 to 50 cc and a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center in order to utilize the advantages of internal bladders of McKay for hollow club heads which are utility irons. As such the coefficient of Restitution would vary across a front face due to the varying of the face thickness.

It would have been obvious to modify the plastic core of McKay to have a density equal or less than 4.5 gm/cc in order to minimize the weight added to a head and in order to make a core inflate easy by not being too dense.

It would have been obvious to include in the head of McKay a gas being air in order to minimize the costs to manufacture a head.

5. Claims 1-3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay in view of Kobayashi.

McKay discloses a first body of variable stiffness/C.O.R. in the form of different desired pressures a plastic core (Col. 4, Lns. 54-58) is inflated to (Col. 6, Lns. 16-17), a rear cavity extending rearward from a front face (Fig. 5), a plastic core of a second material less dense and more flexible than a first material in the form of metal of various types (Col. 4, Lns. 1-10), compressed gas (Col. 4, Lns. 54-58), a rear cavity comprising an opening that is sealed by a visible portion of a core in the form of a head not having a plug (Col. 6, Lns. 15-23 (The terms a closure can be installed implies that it doesn't have to be.)), the curvature and configuration of the striking face are all of conventional

design and configuration (Col. 5, Lns. 19-23), and an inflatable bladder construction can be incorporated into various hollow club heads such as those shaped as a driver (Col. 9, Lns. 13-21). McKay does not disclose the density of the plastic core but clearly an artisan skilled in the art of making an expandable core would have selected a suitable density for the flexible plastic core in which having a density equal or less than 4.5 gm/cc is included.

McKay lacks an internal volume between 35 cc to 50 cc, a plastic core having a density equal or less than 4.5 gm/cc, and air.

Kobayashi discloses a hollow club head in the form of an iron club (Fig. 1, Col. 1, Lns. 5-10) having an internal volume between 35 cc to 50 cc (Claim 1). In view of the patent of Kobayashi it would have been obvious to modify the head of McKay to be an iron club head having an internal volume between 35 to 50 cc in order to utilize the advantages of internal bladders of McKay for hollow club heads which are irons.

It would have been obvious to modify the plastic core of McKay to have a density equal or less than 4.5 gm/cc in order to minimize the weight added to a head and in order to make a core inflate easy by not being too dense.

It would have been obvious to include in the head of McKay a gas being air in order to minimize the costs to manufacture a head.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McKay in view of Nagi as applied to claims 1-5, 7, and 9 above, and further in view of Iwata.

McKay lacks a maximum C.O.R. ranging from about .8 to .9.

Iwata discloses a hollow iron club head having a maximum C.O.R. ranging from about .8 to .9 (Claim 1). In view of the publication of Iwata it would have been obvious to modify the head of McKay to have a maximum C.O.R. ranging from about .8 to .9 in order to maximize energy transferred to a ball at impact.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McKay in view of Nagai as applied to claims 1-5, 7, and 9 above, and further in view of Galloway.

McKay lacks a maximum C.O.R. ranging from about .8 to .9.

Nagai discloses a hollow club head in the form of a utility iron club (Title) which will have a coefficient of restitution having a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center in order to create a spring-like effect or trampoline effect (Fig. 1, [0020]).

Galloway discloses a metal hollow head having a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center in the form of the thickness profile of the face (Col. 8, Lns. 10-35) and a maximum C.O.R. ranging from about .8 to .9 (Col. 8, Lns. 51-60) in order to have a head with a high Coefficient of Restitution (Col. 2, Lns. 50-53). In view of the references of Nagai and Galloway it would have been obvious to modify the head of McKay to have a stiffness of a front face being greatest at a face center and progressively more flexible away from a face center, a coefficient of Restitution varying across a front face, and a maximum C.O.R. ranging from about .8 to .9 in order to have a head with a high C.O.R.

Response to Arguments

8. Claim 9 was not amended as stated in the argument to remove the 35 U.S.C., second paragraph rejection. The argument that MacKay discloses a head designed to be used only as a driver is disagreed with. MacKay discloses that a bladder can be incorporated into various hollow heads such as drivers (Col. 9, Lns. 13-21). Clearly one skilled in the art would consider all hollow heads as suitable possibilities to place a bladder in. The argument that neither MacKay nor Galloway discloses the internal volume claimed is agreed with. As such the rejections has been modified and the action is not made final.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (571) 272-4406. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (571) 272-4415. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 1 April 2005


STEPHEN BLAU
PRIMARY EXAMINER